



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2015-0099; Directorate Identifier 2014-CE-039-AD; Amendment 39-18082; AD 2015-02-15]**

**RIN 2120-AA64**

**Airworthiness Directives; Quest Aircraft Design, LLC Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; request for comments.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for all Quest Aircraft Design, LLC Model KODIAK 100 airplanes. This AD requires inspecting the inboard upper and lower elevator skins for cracking, repairing cracks, and installing doublers. This AD was prompted by a report that fatigue cracks were found in the lower elevator skins. We are issuing this AD to correct the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

We must receive comments on this AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this AD, contact Quest Aircraft Design, LLC, 1200 Turbine Drive, Sandpoint, Idaho 83864; telephone: (208) 263-1111; toll free: (866) 263-1112; fax: (208) 263-1511; CustomerService@QuestAircraft.com; www.questaircraft.com. You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-0099; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Jason Deutschman, Aerospace Engineer, Seattle Aircraft Certification Office, FAA, 1601 Lind Avenue SW, Renton, Washington 98057; phone: (425) 917-6595; fax: (425) 917-6590; email: [jason.deutschman@faa.gov](mailto:jason.deutschman@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We received a report that an operator found two cracks in the lower elevator skin, one per elevator, while performing a preflight walk-around inspection on a Quest Aircraft Design, LLC Model KODIAK 100 airplane.

The trailing edge skin has a built-in joggle to maintain the aerodynamic profile of the surface in the presence of a skin lap. The joggle causes the skin to straighten under tension loads and buckle under compression loads. We have determined that secondary bending stresses at the joggle are the direct cause of the cracking.

This condition, if not corrected, could cause failure of the elevator skins to sustain limit load, which could result in loss of elevator control, elevator flutter, or loss of elevator. We are issuing this AD to correct the unsafe condition on these products.

### **Relevant Service Information**

We reviewed Quest Aircraft KODIAK Mandatory Service Bulletin SB 14-09, Revision 1, dated December 11, 2014, and Quest Aircraft Field Service Instruction, Elevator Doubler Installation, Elevator Serial Numbers 0001 through 0149, Report No. FSI-106, Revision 02, not dated. The service information describes procedures for inspecting the inboard upper and lower skins of the elevator cracking, repairing cracks, and installing doublers to prevent cracking from occurring. You can find this information at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-0099.

### **FAA's Determination**

We are issuing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

### **AD Requirements**

This AD requires accomplishing the actions specified in the service information described previously.

### **FAA's Justification and Determination of the Effective Date**

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because failure of the elevator skins to sustain limit load could result in loss of elevator control, elevator flutter, or loss of elevator. Therefore, we find that notice and opportunity for prior public comment are impracticable and that good cause exists for making this amendment effective in less than 30 days.

### **Comments Invited**

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment. However, we invite you to send any written data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include the docket number FAA-2015-0099 and Directorate Identifier 2014-CE-039-AD at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this AD.

### **Costs of Compliance**

We estimate that this AD affects 57 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

### Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspect the inboard upper and lower skins of the elevator for cracking	.5 work-hour X \$85 per hour = \$42.50	Not applicable	\$42.50	\$2,422.50
Install doublers	4 work-hours X \$85 per hour = \$340	Not applicable	\$340	\$19,380

We estimate the following costs to do any necessary repairs that would be required based on the results of the inspection. We have no way of determining the number of aircraft that might need this repair:

### On-condition costs

Action	Labor cost	Parts cost	Cost per product
Repair cracks to the inboard upper and lower skins of the elevator	.5 work-hour X \$85 per hour = \$42.50	Not applicable	\$42.50

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

### Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs" describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, section 44701: “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

## **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2015-02-15 **Quest Aircraft Design, LLC**: Amendment 39-18082; Docket No.

FAA-2015-0099; Directorate Identifier 2014-CE-039-AD.

#### **(a) Effective Date**

This AD is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

#### **(c) Applicability**

This AD applies to Quest Aircraft Design, LLC Model KODIAK 100 airplanes, all serial numbers, that are:

- (1) equipped with elevators with serial numbers 0001 through 0149; and
- (2) certificated in any category.

#### **(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 5522; Elevator Skins.

#### **(e) Unsafe Condition**

This AD was prompted by a report that fatigue cracks were found in the lower elevator skins. We are issuing this AD to correct the unsafe condition on these products.

**(f) Compliance**

Comply with this AD within the compliance times specified in paragraphs (g) through (j) of this AD, unless already done.

**(g) Inspect the Elevator Skins for Cracking**

At or before reaching 1,500 hours time in service (TIS) on the elevator or within the next 25 hours TIS after [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] (the effective date of this AD), whichever occurs later, inspect the top and bottom of the elevator for cracking in the forward inboard end of the trailing edge skin, aft of the spar. Do the inspection following section 4. of Quest Aircraft Field Service Instruction, Elevator Doubler Installation, Elevator Serial Numbers 0001 through 0149, Report No. FSI-106, Revision 02, not dated, as specified in Quest Aircraft KODIAK Mandatory Service Bulletin SB 14-09, Revision 1, dated December 11, 2014.

Note 1 to paragraph (g) of this AD: Quest Aircraft Field Service Instruction, Elevator Doubler Installation, Elevator Serial Numbers 0001 through 0149, Report No. FSI-106, Revision 02, not dated, references Advisory Circular 43.13-1B, Section 2. The reference should state Advisory Circular 43.13-1B, chapter 5, section 2. You may find Advisory Circular 43.13-1B on the Internet at [http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rgAdvisoryCircular.nsf/0/99C827DB9BAAC81B86256B4500596C4E?OpenDocument&Highlight=43.13-1b](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgAdvisoryCircular.nsf/0/99C827DB9BAAC81B86256B4500596C4E?OpenDocument&Highlight=43.13-1b).

**(h) Install Doublers**

If no cracking was found during the inspection required in paragraph (g) of this AD, before further flight after the inspection, install doublers. Do the installation following section 5.1 of Quest Aircraft Field Service Instruction, Elevator Doubler Installation, Elevator Serial Numbers 0001 through 0149, Report No. FSI-106, Revision 02, not dated, as specified in Quest Aircraft KODIAK Mandatory Service Bulletin SB 14-09, Revision 1, dated December 11, 2014.



**(i) Repair Cracked Elevator Skins and Install Doublers**

If cracking was found during the inspection required in paragraph (g) of this AD, before further flight after the inspection, repair the cracks and install doublers, except as specified in paragraph (j). Do the repair and installation following section 5.2 of Quest Aircraft Field Service Instruction, Elevator Doubler Installation, Elevator Serial Numbers 0001 through 0149, Report No. FSI-106, Revision 02, not dated, as specified in Quest Aircraft KODIAK Mandatory Service Bulletin SB 14-09, Revision 1, dated December 11, 2014.

**(j) Cracked Elevator Skins That Exceed Service Bulletin Repair Limits**

If the cracking found during the inspection required in paragraph (g) of this AD exceeds the repair specified in paragraph (i) of this AD, before further flight, obtain an FAA-approved repair method from Quest Aircraft by contacting the Manager, Seattle Aircraft Certification Office (ACO), FAA, as specified in paragraph (k) of this AD. To use a repair method approved by the Manager of the Seattle ACO, the approval letter must specifically reference this AD.

**(k) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle ACO, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (m) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(l) Related Information**

For more information about this AD, contact Jason Deutschman, Aerospace Engineer, Seattle Aircraft Certification Office, FAA, 1601 Lind Avenue SW, Renton, Washington 98057; phone: (425) 917-6595; fax: (425) 917-6590; email: jason.deutschman@faa.gov.

**(m) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Quest Aircraft KODIAK Mandatory Service Bulletin SB 14-09, Revision 1, dated December 11, 2014.

(ii) Quest Aircraft Field Service Instruction, Elevator Doubler Installation, Elevator Serial Numbers 0001 through 0149, Report No. FSI-106, Revision 02, not dated.

(3) For Quest Aircraft service information identified in this AD, contact Quest Aircraft Design, LLC, 1200 Turbine Drive, Sandpoint, Idaho 83864; telephone: (208) 263-1111; toll free: (866) 263-1112; fax: (208) 263-1511; CustomerService@QuestAircraft.com; www.questaircraft.com.

(4) You may view this service information at FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Kansas City, Missouri, on January 16, 2015.

Kelly A. Broadway,  
Acting Manager, Small Airplane Directorate,  
Aircraft Certification Service.

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